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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,804	10/20/2003	Takahito Suzuki	B0306T	2449

7590 03/28/2005
TAKEUCHI & TAKEUCHI
1700 DIAGONAL ROAD
SUITE 310
ALEXANDRIA, VA 22314

EXAMINER

TRAN, MINH LOAN

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/687,804	Applicant(s) SUZUKI, TAKAHITO	
	Examiner Minh-Loan T. Tran	Art Unit 2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/20/03, 08/05/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statements filed 10/20/2003 and 08/05/2004 have been considered.

Oath/Declaration

3. The oath or declaration filed on 10/20/2003 is acceptable.

Drawings

4. The drawings were received on 10/20/2003. These drawings are acceptable.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 19-21, "said semiconductor laser, separation region, and electroabsorptive modulator each have a side provided in parallel with each other" is unclear as to whether it is being referred to the semiconductor laser, separation region, and electroabsorptive modulator each has opposite sides provided in parallel with each other.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 4, 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamada (JP 2001-117058) or Applicant's Prior Art figures 4-7.

With regard to claim 1, figure 35 of Yamada discloses an optical semiconductor device comprising a substrate 10; a semiconductor laser 500 including a lower clad layer 20, an active layer 30, and an upper clad layer 40 formed in this order on the substrate 10; an electroabsorptive modulator 120 including a lower clad layer 20, a light absorption layer 30, and an upper clad layer 40 formed in this order on the substrate 10; a separation region 100 provided between the semiconductor laser 500 and the electroabsorptive modulator 120 and including a lower clad layer 20, a waveguide layer

30, and an upper clad layer 40 formed in this order on the substrate 10; wherein the upper clad layer 40 extends from the semiconductor laser 500 through the separation region 100 to the electroabsorptive modulator 120; the semiconductor laser 500, the separation region 100 and the electroabsorptive modulator 120 each has the outer sides (along the channel 60) provided in parallel with each other; and the upper clad layer 40 extends from the channel 60 up to the outer sides of the separation region 100.

With regard to claim 2, figure 35 of Yamada discloses a contact layer 50 provided on the upper clad 40, a first upper electrode (not numbered) provided on the contact layer 50 in the semiconductor laser 500 and a second electrode (not numbered) provided on the electroabsorptive modulator 120.

With regard to claim 3, figure 35 of Yamada discloses a lower electrode 80 provided on an under-side of the substrate 10.

With regard to claim 4, figure 35 of Yamada discloses a channel 60 from which the upper clad layer 40 is removed, the channel 60 being provided such that the channel 60 surrounds the center portion of the upper clad layer 40 that has not been etched.

With regard to claim 6, figure 35 of Yamada et al. discloses the upper clad layer 40 extends from the semiconductor laser 500 through the separation region 100 to the electroabsorptive modulator 120 via each outer side of the semiconductor laser 500, the separation region 100 and the electroabsorptive modulator 120.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada (JP 2001-117058) or Applicant's Prior Art figures 4-7.

Figure 35 of Yamada discloses all the subject matter claimed except for the contact layer is removed from the separation region. However, it would have been obvious to one of ordinary skill in the art to have the contact layer is removed from the separation region of the Yamada's device because the separation does not have the electrode.

Allowable Subject Matter

9. Claims 5, 8, 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Loan T. Tran whose telephone number is (571) 272-1922. The examiner can normally be reached on Monday-Friday 9:00 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MLt
03/2005


Minh-Loan T. Tran
Primary Examiner
Art Unit 2826